What is claimed:

1. Method for processing video pictures, especially for false contour effect compensation, the video picture consisting of pixels, the pixels being digitally coded with at least one digital code word, wherein to each bit of a digital code word a certain duration is assigned, hereinafter called sub-field, during which the whole pixel or a component of the pixel is activated, wherein a motion vector is calculated for a pixel, and the motion vector is used for re-coding the sub-field code word of the pixel, **characterized in that** the motion vector calculation is made in a manner that the resulting motion vector determines for a current pixel (P8) from which location in a previous video picture the current pixel comes from.

2. Method according to claim 1, wherein the re-coding step includes a step of calculating drag coordinates (Δx_n, Δy_n) for the sub-field code word bits of the current pixel based on the calculated motion vector, and wherein the drag coordinates (Δx_n, Δy_n) are used for selecting a pixel in the video picture and using the corresponding bit of the sub-field code word of the selected pixel to determine the corresponding bit of the new sub-field code word of the current pixel (P8).

3. Method according to claim 2, wherein the calculation of the drag coordinates (Δx_n, Δy_n) is made according to the formula:

$$\Delta x_n = -\frac{Vx \cdot G(n)}{Dur(F)} \quad \text{and} \quad \Delta y_n = -\frac{Vy \cdot G(n)}{Dur(F)}$$

wherein Δx_n represents the relative position in x-direction of a pixel from which the sub-field code word bit needs to be taken for the current pixel;

Δy_n represents the relative position in y-direction of a pixel from which the sub-field code word bit needs to be taken for the current pixel;

V_x is the x-component of the motion vector and V_y is the y-component of the motion vector;

G(n) represents the center of gravity position of the sub-field in the frame period;

n is the current sub-field number and

Dur(F) is the duration of the frame.

4. Method according to one of claims 1 to 3, characterized in that to a pixel three sub-field code words are assigned, one for each colour component.

5. Method according to one of claims 1 to 4, characterized in that a sub-field is a sub-period of a video frame period consisting of an addressing period, a sustaining period and an erasing period.

6. Method according to one of claims 3 to 5, characterized in that the center of gravity (CG) of each sub-field (SF) in a frame period is calculated according to the formula:

$$G(n) = S(n) + Dur(n)/2$$

wherein G(n) represents the center of gravity location in the frame period;

n is the current sub-field number,

S(n) represents the start position of the current sub-field;

and Dur(n) represents the duration of the current sub-field.

7. Apparatus for carrying out the method of one of the preceding claims, the video pictures consisting of pixels, the pixels being digitally coded with at least one digital code

word, wherein to each bit of a digital code word a certain duration is assigned, hereinafter called sub-field, during which the whole pixel or a component of the pixel is activated, **characterized in that**, the apparatus comprises

- a motion estimator (12) for calculating motion vectors (V) for the pixels of a current video picture by comparing a current video picture with at least one previous video picture, the resulting motion vector being defined to determine for a current pixel (P8) from which location in a previous video picture the current pixel (P8) comes from.

8. Apparatus according to claim 7, further comprising a sub-field re-coding unit (13) in which drag coordinates (Δx_n, Δy_n) for the sub-field code word bits of the current pixel (P8) based on the calculated motion vector are calculated, and a selection unit (13), in which the drag coordinates (Δx_n, Δy_n) are used for selecting a pixel in a video picture and using the corresponding bit of the sub-field code word of the selected pixel to determine the corresponding bit of the new sub-field code word of the current pixel (P8).

9. Apparatus according to claim 7 or 8, the apparatus comprising a matrix display, especially plasma, LCOS (Liquid Crystal On Silicon) or DMD display.